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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,413	05/07/2002	Stig Bakke	HAMSO21.001APC	9005

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EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,413

Applicant(s)

BAKKE, STIG

Examiner

Jennifer H Gay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 20-23 is/are allowed.
- 6) ☒ Claim(s) 16-19 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 24-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear to the examiner as to what applicant is referring with the phrase “without substantially reducing admission of the drill bit” in claim 29. A review of the disclosure has not provided a meaning for this phrase.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16-19 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker (US 5,535,835).

Regarding claims 16 and 19: Walker discloses a tool and method for changing the direction of drilling with drilling equipment wherein the tool is configured to change the direction of the drilling in an infinitely variable manner (3:42-47) in response to a change of flow rate in the drilling fluid (1:60-2:11, 5:22-38). An increase in the flow rate of the drilling fluid causes a piston to move thus resulting in the tool changing directing. Once the desired new direction is reached, the operator would inherently reduce the flow rate of the drilling fluid to allow the piston to retract. If the flow rate of the drilling fluid were not reduced, the tool would continue to change direction.

Regarding claims 17 and 30: The tool further includes a means (Figures 4 and 5) for rotating a bent sub **14** in an infinitely variable manner that includes a piston **21** a passage **27** that is choked, i.e. valve **38**, and a set of co-operating guides **33** on opposite walls of the piston. *The examiner notes that if the tool is capable of changing the direction in an infinitely variable manner than it must include a means for doing so.*

Regarding claim 18: The tool further includes a means for controlling the speed of rotation of the tool (16).

Regarding claim 28: The tool is configured to change the direction of drilling while drilling.

Regarding claim 29: The drilling equipment includes a bit **15** and the tool is configured to change the direction of drilling without reducing the admission of the drill bit.

5. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Dorel (US 6,158,529).

Dorel discloses a tool and method for changing the direction of drilling with drilling equipment wherein the tool is configured to change the direction of the drilling in an infinitely variable manner (3:19-26, 8:20-39) in response to a change of flow rate in the drilling fluid (8:40-9:11). The means for changing the direction of the tool is an electrical control unit and mud motor that moves the tool in response to mud pulses in the drilling fluid. Mud pulses are the result of a sudden change in flow rate of drilling fluid thus the tool changes direction in response to the change of flow rate in the drilling fluid. Further, once the mud pulse has passed, i.e. the increased flow rate plug, the control unit will sense that the flow rate of the drilling fluid has decreased thus halt the change of direction of the tool.

Allowable Subject Matter

6. Claims 1-15 and 20-23 are allowed.

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7. Claims 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. In view of applicant's amendment, the objections to claims 16 and 19 have been withdrawn.

9. In view of applicant's arguments that Dorel does not teach sustained change in flow rate, the rejection of claim 16 has been withdrawn and that Dorel does not teach a "piston adapted for rotation...and sets of co-operating guides adapted for forced guiding rotation" the rejection of claim 17 has been withdrawn.

10. Applicant's arguments filed 02 September 2004 have been fully considered but they are not persuasive.

Applicant argues that Walker does not teach changing the direction of drilling in a "substantially infinitely variable manner" because Walker is capable of changing the direction of drilling from a straight direction to a curved direction and uses the rotary table to aid in the changing of direction.

In response the examiner notes that Walker specifically states that the disclosed tool is used to changing the drilling in "any required direction". Further, the claim does not indicate that the curvature is not fixed or that other elements cannot be used to changing the direction of the drill bit in conjunction with tool.

Applicant further argues that Walker does not disclose a "means for rotating a bent sub in a substantially infinitely variable manner" as specifically defined in paragraph 0004 of the instant application.

In response the examiner notes that Walker teaches a tool that uses the flow of drilling mud, and the change in the flow rates thereof, to move a piston which in turn controls the rotation of a rotor 34 and the drill bit, see paragraph 4 above. The piston

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disclosed by Walker includes all of the elements required in paragraph 0004 of the instant application.

With regards to claim 19, applicant argues that Dorel does not disclose changing the direction of drilling in response to a sustained changed in flow rate of drilling fluid.

In response, it is noted that the features upon which applicant relies (i.e., changing the direction of drilling in response to a sustained changed in flow rate of drilling fluid) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

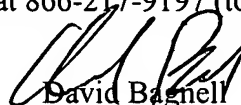
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H Gay whose telephone number is (703) 308-2881. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Bagnell
Supervisory Patent Examiner
Art Unit 3672

JHG 
October 25, 2004